

ภาคผนวก ค
รายงานผลการตรวจวัดคุณภาพสิ่งแวดล้อม



TEST REPORT

Analysis No. : R24-0217

Received Date : 19/01/24

Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการ โรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ

Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000

Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Report Date : 30/01/24

Analysis Date : 18-26/01/24

Job No. : S670146/Jan

Sampling By : TET

Type of Sample : Stack

Sampling Conditions :

Item	Description	Unit	Result
			RTO
			2401-AS0486
			ABS : RTO1 Stack (Inlet)
1	Sampling Date	-	18/01/24
2	Stack Diameter	m	Ø 1.54
3	Temperature ⁽¹⁾	°C	62
4	Stack Gas Velocity ⁽¹⁾	m/s	14.4
5	Flow Rate ⁽¹⁾	m ³ /s	26.8
6	Flow Rate ⁽²⁾	Nm ³ /s	23.8
7	O ₂ Rate ⁽¹⁾ , dry basis	%	19.2
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	759.2

Parameter	Unit	Method	Result		Analysis Date
			RTO		
			2401-AS0486		
			ABS : RTO1 Stack (Inlet)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	7.60	0.3409 (g/s)	18/01/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	< 0.0062 (g/s)	18/01/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	17	0.4642 (g/s)	18/01/24
Styrene ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	4.631	0.4697 (g/s)	19-22/01/24
Acrylonitrile ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.014	< 0.0007 (g/s)	19-22/01/24
TOC ^{(2)*}	ppm	US.EPA Method 25A (FIA)	4.53	0.2473 (g/s)	26/01/24

Remarks

* Subcontractor
: ABS : RTO1 Stack (Inlet) = 47P 0750586 UTM 1400133

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)
Source : Fuel Gas 164 Kg/hr.

Reviewed by

Ms. Wareerut Prachumdaeng
Chief of Laboratory

30/01/24



Approved by

Mrs. Pornpit Pethshee
Laboratory Manager

30/01/24

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-0217

Received Date : 19/01/24

Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการโรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ

Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000

Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Sampling Conditions :

Item	Description	Unit	Result	
			RTO	
			2401-AS0487	2401-AS0488
			ABS : RTO1 Stack (Outlet-A)	ABS : RTO1 Stack (Outlet-B)
1	Sampling Date	-	18/01/24	18/01/24
2	Stack Diameter	m	Ø 1.35	Ø 1.35
3	Temperature ⁽¹⁾	°C	105	109
4	Stack Gas Velocity ⁽¹⁾	m/s	10.6	10.6
5	Flow Rate ⁽¹⁾	m ³ /s	15.2	15.2
6	Flow Rate ⁽²⁾	Nm ³ /s	11.9	11.8
7	O ₂ Rate ⁽¹⁾ , dry basis	%	19.8	19.7
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0	< 1.0
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	757.2	757.2

Parameter	Unit	Method	Result				Standard (With Combustion)			Analysis Date
			RTO							
			2401-AS0487		2401-AS0488		(A)	(B)		
			ABS : RTO1 Stack (Outlet-A)		ABS : RTO1 Stack (Outlet-B)					
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	5.60	0.1256 (g/s)	6.40	0.1421 (g/s)	25	0.6049 (g/s)	200	18/01/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	< 0.0031 (g/s)	< 0.10	< 0.0031 (g/s)	10	0.3367 (g/s)	60	18/01/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	21	0.2867 (g/s)	19	0.2567 (g/s)	-	-	690	18/01/24
Styrene ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.007	< 0.0004 (g/s)	< 0.007	< 0.0004 (g/s)	20.52	1.124 (g/s)	-	19-22/01/24
Acrylonitrile ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.014	< 0.0004 (g/s)	< 0.014	< 0.0004 (g/s)	9.5	0.265 (g/s)	-	19-22/01/24
TOC ^{(2)*}	ppm	US.EPA Method 25A (FIA)	5.76	0.1573 (g/s)	5.46	0.1475 (g/s)	-	-	-	26/01/24

Remarks * Subcontractor

: ABS : RTO1 Stack (Outlet-A) = 47P 0750567 UTM 1400134

ABS : RTO1 Stack (Outlet-B) = 47P 0750564 UTM 1400136

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Standard (A) According to Environmental Impact Assessment.

(B) Notification of the Ministry of Industry (2006) (B.E. 2549) and Notification of the Ministry of Natural Resources and Environment (2006) (B.E. 2549)

Source : Fuel Gas 164 Kg/hr.

Reviewed by

Ms. Wareerut Prachumdaeng
Chief of Laboratory
20/01/24

Approved by

Mrs. Pomtip Pethshee
Laboratory Manager
30/01/24



● REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY

● DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-0217/DIW
Received Date : 19/01/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการโรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ
Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000
Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Report Date : 30/01/24
Analysis Date : 18/01/24
Job No. : S670146/Jan
Sampling By : Mr. Kiattisak Wandee
Registration No. : ว-236-จ-0012
Type of Sample : Stack

Sampling Conditions :

Item	Description	Unit	Result	
			RTO	
			2401-AS0487	2401-AS0488
			ABS : RTO1 Stack (Outlet-A)	ABS : RTO1 Stack (Outlet-B)
1	Sampling Date	-	18/01/24	18/01/24
2	Stack Diameter	m	Ø 1.35	Ø 1.35
3	Temperature ⁽¹⁾	°C	105	109
4	Stack Gas Velocity ⁽¹⁾	m/s	10.6	10.6
5	Flow Rate ⁽¹⁾	m ³ /s	15.2	15.2
6	Flow Rate ⁽²⁾	Nm ³ /s	11.9	11.8
7	O ₂ Rate ⁽¹⁾ , dry basis	%	19.8	19.7
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0	< 1.0
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	757.2	757.2

Parameter	Unit	Method	Result		Standard (With Combustion)	Analysis Date
			RTO			
			2401-AS0487	2401-AS0488		
			ABS : RTO1 Stack (Outlet-A)	ABS : RTO1 Stack (Outlet-B)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	5.60	6.40	200	18/01/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	< 0.10	60	18/01/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	21	19	690	18/01/24

Remarks : ABS : RTO1 Stack (Outlet-A) = 47P 0750567 UTM 1400134

ABS : RTO1 Stack (Outlet-B) = 47P 0750564 UTM 1400136

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Standard : Notification of the Ministry of Industry (2006) (B.E. 2549)

Source : Fuel Gas 164 Kg/hr.

Reviewed by

Ms. Wareerut Prachumdaeng
Chief of Laboratory
ว-236-จ-0002
30.01.24



Approved by

Mrs. Pomtip Pethshee
Laboratory Manager
ว-236-จ-0003
30.01.24

- PRIVATE LABORATORY REGISTERED NO. ว-236
- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-0597
Received Date : 14/02/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการโรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ
Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000
Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Report Date : 04/03/24
Analysis Date : 13-19/02/24
Job No. : S670146/Feb
Sampling By : TET
Type of Sample : Stack

Sampling Conditions :

Item	Description	Unit	Result	
			RTO	
			2402-AS0511	
			ABS : RTO1 Stack (Inlet)	
1	Sampling Date	-	13/02/24	
2	Stack Diameter	m	Ø 1.54	
3	Temperature ⁽¹⁾	°C	52	
4	Stack Gas Velocity ⁽¹⁾	m/s	14.7	
5	Flow Rate ⁽¹⁾	m ³ /s	27.4	
6	Flow Rate ⁽²⁾	Nm ³ /s	25.1	
7	O ₂ Rate ⁽¹⁾ , dry basis	%	19.2	
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0	
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	759.4	

Parameter	Unit	Method	Result		Analysis Date
			RTO		
			2402-AS0511		
			ABS : RTO1 Stack (Inlet)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	8.50	0.4013 (g/s)	13/02/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	< 0.0066 (g/s)	13/02/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	20	0.5748 (g/s)	13/02/24
Styrene ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.007	< 0.0008 (g/s)	15-19/02/24
Acrylonitrile ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.014	< 0.0008 (g/s)	15-19/02/24
TOC ^{(2)*}	ppm	US.EPA Method 25A (FIA)	2.61	21.34 (g/s)	19/02/24

Remarks * Subcontractor

: ABS : RTO1 Stack (Inlet) = 47P 0750586 UTM 1400133

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Source ; Fuel Gas 164 Kg/hr.

Reviewed by

Ms. Wareerut Prachumdaeng
Chief of Laboratory
04/03/24



Approved by

Mrs. Porntip Pethshee
Laboratory Manager
04/03/24

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-0597
Received Date : 14/02/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการโรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ
Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000
Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Report Date : 04/03/24
Analysis Date : 13-19/02/24
Job No. : S670146/Feb
Sampling By : TET
Type of Sample : Stack

Sampling Conditions :

Item	Description	Unit	Result	
			RTO	
			2402-AS0512	2402-AS0513
			ABS : RTO1 Stack (Outlet-A)	ABS : RTO1 Stack (Outlet-B)
1	Sampling Date	-	13/02/24	13/02/24
2	Stack Diameter	m	Ø 1.35	Ø 1.35
3	Temperature ⁽¹⁾	°C	118	121
4	Stack Gas Velocity ⁽¹⁾	m/s	11.8	12.4
5	Flow Rate ⁽¹⁾	m ³ /s	16.9	17.8
6	Flow Rate ⁽²⁾	Nm ³ /s	12.8	13.4
7	O ₂ Rate ⁽¹⁾ , dry basis	%	19.6	18.6
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0	< 1.0
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	757.3	757.3

Parameter	Unit	Method	Result				Standard (With Combustion)		Analysis Date	
			RTO							
			2402-AS0512		2402-AS0513		(A)	(B)		
			ABS : RTO1 Stack (Outlet-A)		ABS : RTO1 Stack (Outlet-B)					
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	4.10	0.0990 (g/s)	6.60	0.1662 (g/s)	25	0.6049 (g/s)	200	13/02/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	< 0.0034 (g/s)	< 0.10	< 0.0035 (g/s)	10	0.3367 (g/s)	60	13/02/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	29	0.4262 (g/s)	29	0.4444 (g/s)	-	-	690	13/02/24
Styrene ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.007	< 0.0004 (g/s)	< 0.007	< 0.0004 (g/s)	20.52	1.124 (g/s)	-	15-19/02/24
Acrylonitrile ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.014	< 0.0004 (g/s)	< 0.014	< 0.0004 (g/s)	9.5	0.265 (g/s)	-	15-19/02/24
TOC ^{(2)*}	ppm	US.EPA Method 25A (FIA)	3.92	0.1151 (g/s)	4.17	0.1277 (g/s)	-	-	-	19/02/24

Remarks * Subcontractor

: ABS : RTO1 Stack (Outlet-A) = 47P 0750567 UTM 1400134

ABS : RTO1 Stack (Outlet-B) = 47P 0750564 UTM 1400136

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Standard (A) According to Environmental Impact Assessment.

(B) Notification of the Ministry of Industry (2006) (B.E. 2549) and Notification of the Ministry of Natural Resources and Environment (2006) (B.E. 2549)

Source : Fuel Gas 164 Kg/hr.

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

04.03.24

Approved by

Mrs. Pornpip Pethshee

Laboratory Manager

04.03.24

● REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY

● DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL





TEST REPORT

Analysis No. : R24-0597/DIW
Received Date : 14/02/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการโรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ
Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000
Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Report Date : 04/03/24
Analysis Date : 13/02/24
Job No. : S670146/Feb
Sampling By : Mr. Paryud Jiwdach
Registration No. : ว-236-จ-0027
Type of Sample : Stack

Sampling Conditions :

Item	Description	Unit	Result	
			RTO	
			2402-AS0512	2402-AS0513
			ABS : RTO1 Stack (Outlet-A)	ABS : RTO1 Stack (Outlet-B)
1	Sampling Date	-	13/02/24	13/02/24
2	Stack Diameter	m	Ø 1.35	Ø 1.35
3	Temperature ⁽¹⁾	°C	118	121
4	Stack Gas Velocity ⁽¹⁾	m/s	11.8	12.4
5	Flow Rate ⁽¹⁾	m ³ /s	16.9	17.8
6	Flow Rate ⁽²⁾	Nm ³ /s	12.8	13.4
7	O ₂ Rate ⁽¹⁾ , dry basis	%	19.6	18.6
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0	< 1.0
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	757.3	757.3

Parameter	Unit	Method	Result		Standard (With Combustion)	Analysis Date
			RTO			
			2402-AS0512	2402-AS0513		
			ABS : RTO1 Stack (Outlet-A)	ABS : RTO1 Stack (Outlet-B)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	4.10	6.60	200	13/02/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	< 0.10	60	13/02/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	29	29	690	13/02/24

Remarks : ABS : RTO1 Stack (Outlet-A) = 47P 0750567 UTM 1400134

ABS : RTO1 Stack (Outlet-B) = 47P 0750564 UTM 1400136

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Standard : Notification of the Ministry of Industry (2006) (B.E. 2549)

Source ; Fuel Gas 164 Kg/hr.

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

ว-236-ก-0002

04/03/24



Approved by

Mrs. Pornpip Pethshee

Laboratory Manager

ว-236-ก-0003

04/03/24

- PRIVATE LABORATORY REGISTERED NO. ว-236
- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL





TEST REPORT

Analysis No. : R24-0954
Received Date : 13/03/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการโรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ

Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000

Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Report Date : 21/03/24
Analysis Date : 12-20/03/24
Job No. : S670146/Mar
Sampling By : TET
Type of Sample : Stack

Sampling Conditions :

Item	Description	Unit	Result	
			RTO	
			2403-AS0467	
			ABS : RTO1 Stack (Inlet)	
1	Sampling Date	-	12/03/24	
2	Stack Diameter	m	Ø 1.54	
3	Temperature ⁽¹⁾	°C	49	
4	Stack Gas Velocity ⁽¹⁾	m/s	15.6	
5	Flow Rate ⁽¹⁾	m ³ /s	29.1	
6	Flow Rate ⁽²⁾	Nm ³ /s	26.9	
7	O ₂ Rate ⁽¹⁾ , dry basis	%	19.8	
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0	
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	759.5	

Parameter	Unit	Method	Result		Analysis Date
			RTO		
			2403-AS0467		
			ABS : RTO1 Stack (Inlet)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	8.20	0.4148 (g/s)	12/03/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	< 0.0070 (g/s)	12/03/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	17	0.5234 (g/s)	12/03/24
Styrene ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	0.950	0.1087 (g/s)	14-15/03/24
Acrylonitrile ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	8.895	0.5184 (g/s)	14-15/03/24
TOC ^{(2)*}	ppm	US.EPA Method 25A (FIA)	71.88	4.4252 (g/s)	20/03/24

Remarks * Subcontractor

: ABS : RTO1 Stack (Inlet) = 47P 0750586 UTM 1400133

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Source ; Fuel Gas 164 Kg/hr.

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

21/03/24



Approved by

Mrs. Pornpip Pethshee
Laboratory Manager

21/03/24

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-0954
Received Date : 13/03/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการโรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ
Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000
Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Report Date : 21/03/24
Analysis Date : 12-20/03/24
Job No. : S670146/Mar
Sampling By : TET
Type of Sample : Stack

Sampling Conditions :

Item	Description	Unit	Result	
			RTO	
			2403-AS0468	2403-AS0469
			ABS : RTO1 Stack (Outlet-A)	ABS : RTO1 Stack (Outlet-B)
1	Sampling Date	-	12/03/24	12/03/24
2	Stack Diameter	m	Ø 1.35	Ø 1.35
3	Temperature ⁽¹⁾	°C	110	115
4	Stack Gas Velocity ⁽¹⁾	m/s	11.4	11.4
5	Flow Rate ⁽¹⁾	m ³ /s	16.3	16.3
6	Flow Rate ⁽²⁾	Nm ³ /s	12.7	12.5
7	O ₂ Rate ⁽¹⁾ , dry basis	%	18.7	18.4
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0	< 1.0
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	757.3	757.3

Parameter	Unit	Method	Result				Standard (With Combustion)		Analysis Date	
			RTO							
			2403-AS0468		2403-AS0469		(A)	(B)		
			ABS : RTO1 Stack (Outlet-A)		ABS : RTO1 Stack (Outlet-B)					
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	5.60	0.1333 (g/s)	5.90	0.1387 (g/s)	25	0.6049 (g/s)	200	12/03/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	< 0.0033 (g/s)	< 0.10	< 0.0033 (g/s)	10	0.3367 (g/s)	60	12/03/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	36	0.5218 (g/s)	36	0.5151 (g/s)	-	-	690	12/03/24
Styrene ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.007	< 0.0004 (g/s)	< 0.007	< 0.0004 (g/s)	20.52	1.124 (g/s)	-	14-15/03/24
Acrylonitrile ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.014	< 0.0004 (g/s)	< 0.014	< 0.0004 (g/s)	9.5	0.265 (g/s)	-	14-15/03/24
TOC ^{(2)*}	ppm	US.EPA Method 25A (FIA)	17.55	0.5087 (g/s)	31.23	0.8935 (g/s)	-	-	-	20/03/24

Remarks

* Subcontractor
: ABS : RTO1 Stack (Outlet-A) = 47P 0750567 UTM 1400134
ABS : RTO1 Stack (Outlet-B) = 47P 0750564 UTM 1400136

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Standard

(A) According to Environmental Impact Assessment.
(B) Notification of the Ministry of Industry (2006) (B.E. 2549) and Notification of the Ministry of Natural Resources and Environment (2006) (B.E. 2549)
Source : Fuel Gas 164 Kg/hr.

Reviewed by

Mrs. Warerut Prachumdaeng
Chief of Laboratory
21.03.24



Approved by

Mrs. Pornnip Pethshee
Laboratory Manager
21.03.24

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-0954/DIW
Received Date : 13/03/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการโรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ
Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000
Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Report Date : 21/03/24
Analysis Date : 12/03/24
Job No. : S670146/Mar
Sampling By : Mr. Paryud Jiwdach
Registration No. : จ-236-จ-0027
Type of Sample : Stack

Sampling Conditions :

Item	Description	Unit	Result	
			RTO	
			2403-AS0468	2403-AS0469
			ABS : RTO1 Stack (Outlet-A)	ABS : RTO1 Stack (Outlet-B)
1	Sampling Date	-	12/03/24	12/03/24
2	Stack Diameter	m	Ø 1.35	Ø 1.35
3	Temperature ⁽¹⁾	°C	110	115
4	Stack Gas Velocity ⁽¹⁾	m/s	11.4	11.4
5	Flow Rate ⁽¹⁾	m ³ /s	16.3	16.3
6	Flow Rate ⁽²⁾	Nm ³ /s	12.7	12.5
7	O ₂ Rate ⁽¹⁾ , dry basis	%	18.7	18.4
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0	< 1.0
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	757.3	757.3

Parameter	Unit	Method	Result		Standard (With Combustion)	Analysis Date
			RTO			
			2403-AS0468	2403-AS0469		
			ABS : RTO1 Stack (Outlet-A)	ABS : RTO1 Stack (Outlet-B)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	5.60	5.90	200	12/03/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	< 0.10	60	12/03/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	36	36	690	12/03/24

Remarks : ABS : RTO1 Stack (Outlet-A) = 47P 0750567 UTM 1400134

ABS : RTO1 Stack (Outlet-B) = 47P 0750564 UTM 1400136

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Standard : Notification of the Ministry of Industry (2006) (B.E. 2549)

Source ; Fuel Gas 164 Kg/hr.

Reviewed by

Ms. Wareerut Prachumdaeng
Chief of Laboratory
จ-236-ก-0002
21/03/24



Approved by

Mrs. Pornpip Pethshee
Laboratory Manager
จ-236-ก-0003
21/03/24

- PRIVATE LABORATORY REGISTERED NO. จ-236
- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-1464
Received Date : 25/04/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการโรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ

Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000

Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Sampling Conditions :

Item	Description	Unit	Result	
			RTO	
			2404-AS0682	
			ABS : RTO1 Stack (Inlet)	
1	Sampling Date	-	23/04/24	
2	Stack Diameter	m	Ø 1.54	
3	Temperature ⁽¹⁾	°C	50	
4	Stack Gas Velocity ⁽¹⁾	m/s	16.5	
5	Flow Rate ⁽¹⁾	m ³ /s	30.7	
6	Flow Rate ⁽²⁾	Nm ³ /s	28.4	
7	O ₂ Rate ⁽¹⁾ , dry basis	%	19.6	
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0	
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	759.9	

Parameter	Unit	Method	Result		Analysis Date
			RTO		
			2404-AS0682		
			ABS : RTO1 Stack (Inlet)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	10.10	0.5389 (g/s)	23/04/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	< 0.0074 (g/s)	23/04/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	21	0.6821 (g/s)	23/04/24
Styrene ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.007	< 0.0009 (g/s)	25-29/04/24
Acrylonitrile ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.014	< 0.0009 (g/s)	25-29/04/24
TOC ^{(2)*}	ppm	US.EPA Method 25A (FIA)	9.84	0.6390 (g/s)	30/04/24

Remarks * Subcontractor

: ABS : RTO1 Stack (Inlet) = 47P 0750586 UTM 1400133

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Source ; Fuel Gas 164 Kg/hr.

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

06/06/24



Approved by

Mrs. Pornpip Pethshee

Laboratory Manager

06/06/24

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-1464
Received Date : 25/04/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการโรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ

Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000

Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Sampling Conditions :

Item	Description	Unit	Result	
			RTO	
			2404-AS0683	2404-AS0684
			ABS : RTO1 Stack (Outlet-A)	ABS : RTO1 Stack (Outlet-B)
1	Sampling Date	-	23/04/24	23/04/24
2	Stack Diameter	m	Ø 1.35	Ø 1.35
3	Temperature ⁽¹⁾	°C	108	120
4	Stack Gas Velocity ⁽¹⁾	m/s	11.5	11.9
5	Flow Rate ⁽¹⁾	m ³ /s	16.5	17.0
6	Flow Rate ⁽²⁾	Nm ³ /s	12.8	12.9
7	O ₂ Rate ⁽¹⁾ , dry basis	%	18.2	18.1
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0	< 1.0
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	757.3	757.3

Parameter	Unit	Method	Result				Standard (With Combustion)			Analysis Date
			RTO							
			2404-AS0683		2404-AS0684		(A)	(B)		
			ABS : RTO1 Stack (Outlet-A)		ABS : RTO1 Stack (Outlet-B)					
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	8.60	0.2077 (g/s)	8.80	0.2132 (g/s)	25	0.6049 (g/s)	200	23/04/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	< 0.0034 (g/s)	< 0.10	< 0.0034 (g/s)	10	0.3367 (g/s)	60	23/04/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	46	0.6761 (g/s)	32	0.4718 (g/s)	-	-	690	23/04/24
Styrene ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.007	< 0.0004 (g/s)	< 0.007	< 0.0004 (g/s)	20.52	1.124 (g/s)	-	25-29/04/24
Acrylonitrile ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.014	< 0.0004 (g/s)	< 0.014	< 0.0004 (g/s)	9.5	0.265 (g/s)	-	25-29/04/24
TOC ^{(2)*}	ppm	US.EPA Method 25A (FIA)	5.67	0.1666 (g/s)	4.95	0.1459 (g/s)	-	-	-	30/04/24

Remarks

* Subcontractor
: ABS : RTO1 Stack (Outlet-A) = 47P 0750567 UTM 1400134
ABS : RTO1 Stack (Outlet-B) = 47P 0750564 UTM 1400136

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Standard

(A) According to Environmental Impact Assessment.

(B) Notification of the Ministry of Industry (2006) (B.E. 2549) and Notification of the Ministry of Natural Resources and Environment (2006) (B.E. 2549)
Source : Fuel Gas 164 Kg/hr.

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

06.06.24

Approved by

Mrs. Pornpip Pethshee

Laboratory Manager

06.06.24

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-1464/DIW
Received Date : 25/04/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการ โรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ
Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000
Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Report Date : 06/06/24
Analysis Date : 23/04/24
Job No. : S670146/Apr
Sampling By : Mr. Paryud Jiwdach
Registration No. : ว-236-จ-0027
Type of Sample : Stack

Sampling Conditions :

Item	Description	Unit	Result	
			RTO	
			2404-AS0683	2404-AS0684
			ABS : RTO1 Stack (Outlet-A)	ABS : RTO1 Stack (Outlet-B)
1	Sampling Date	-	23/04/24	23/04/24
2	Stack Diameter	m	Ø 1.35	Ø 1.35
3	Temperature ⁽¹⁾	°C	108	120
4	Stack Gas Velocity ⁽¹⁾	m/s	11.5	11.9
5	Flow Rate ⁽¹⁾	m ³ /s	16.5	17.0
6	Flow Rate ⁽²⁾	Nm ³ /s	12.8	12.9
7	O ₂ Rate ⁽¹⁾ , dry basis	%	18.2	18.1
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0	< 1.0
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	757.3	757.3

Parameter	Unit	Method	Result		Standard (With Combustion)	Analysis Date
			RTO			
			2404-AS0683	2404-AS0684		
			ABS : RTO1 Stack (Outlet-A)	ABS : RTO1 Stack (Outlet-B)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	8.60	8.80	200	23/04/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	< 0.10	60	23/04/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	46	32	690	23/04/24

Remarks : ABS : RTO1 Stack (Outlet-A) = 47P 0750567 UTM 1400134

ABS : RTO1 Stack (Outlet-B) = 47P 0750564 UTM 1400136

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Standard : Notification of the Ministry of Industry (2006) (B.E. 2549)

Source : Fuel Gas 164 Kg/hr.

Reviewed by

Ms. Wareerut Prachumdaeng
Chief of Laboratory

ว-236-จ-0002
06/06/24



Approved by

Mrs. Pornpip Pethshee
Laboratory Manager

ว-236-จ-0003
06/06/24

- PRIVATE LABORATORY REGISTERED NO. ว-236
- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-1722
Received Date : 16/05/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการโรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ
Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000
Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Report Date : 28/05/24
Analysis Date : 14-24/05/24
Job No. : S670146/May
Sampling By : TET
Type of Sample : Stack

Sampling Conditions :

Item	Description	Unit	Result	
			RTO	
			2405-AS0530	
			ABS : RTO1 Stack (Inlet)	
1	Sampling Date	-	14/05/24	
2	Stack Diameter	m	Ø 1.54	
3	Temperature ⁽¹⁾	°C	50	
4	Stack Gas Velocity ⁽¹⁾	m/s	15.5	
5	Flow Rate ⁽¹⁾	m ³ /s	28.9	
6	Flow Rate ⁽²⁾	Nm ³ /s	26.6	
7	O ₂ Rate ⁽¹⁾ , dry basis	%	20.1	
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0	
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	759.6	

Parameter	Unit	Method	Result		Analysis Date
			RTO		
			2405-AS0530		
			ABS : RTO1 Stack (Inlet)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	7.20	0.3608 (g/s)	14/05/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	< 0.0070 (g/s)	14/05/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	18	0.5490 (g/s)	14/05/24
Styrene ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	0.484	0.0548 (g/s)	21-23/05/24
Acrylonitrile ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.014	< 0.0009 (g/s)	21-23/05/24
TOC ^{(2)*}	ppm	US.EPA Method 25A (FIA)	5.64	0.3434 (g/s)	24/05/24

Remarks * Subcontractor

: ABS : RTO1 Stack (Inlet) = 47P 0750586 UTM 1400133

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Source : Fuel Gas 164 Kg/hr.

Reviewed by

Ms. Wareerut Prachumdaeng
Chief of Laboratory
18.05.24



Approved by

Mrs. Porntip Pethshee
Laboratory Manager
18.05.24

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-1722
Received Date : 16/05/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการโรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ
Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000
Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Report Date : 28/05/24
Analysis Date : 14-24/05/24
Job No. : S670146/May
Sampling By : TET
Type of Sample : Stack

Sampling Conditions :

Item	Description	Unit	Result	
			RTO	
			2405-AS0531	2405-AS0532
			ABS : RTO1 Stack (Outlet-A)	ABS : RTO1 Stack (Outlet-B)
1	Sampling Date	-	14/05/24	14/05/24
2	Stack Diameter	m	Ø 1.35	Ø 1.35
3	Temperature ⁽¹⁾	°C	120	124
4	Stack Gas Velocity ⁽¹⁾	m/s	11.5	11.6
5	Flow Rate ⁽¹⁾	m ³ /s	16.5	16.6
6	Flow Rate ⁽²⁾	Nm ³ /s	12.4	12.4
7	O ₂ Rate ⁽¹⁾ , dry basis	%	18.6	18.2
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0	< 1.0
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	757.2	757.3

Parameter	Unit	Method	Result				Standard (With Combustion)			Analysis Date
			RTO							
			2405-AS0531		2405-AS0532		(A)	(B)		
			ABS : RTO1 Stack (Outlet-A)		ABS : RTO1 Stack (Outlet-B)					
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	6.10	0.1428 (g/s)	10.50	0.2454 (g/s)	25	0.6049 (g/s)	200	14/05/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	< 0.0033 (g/s)	< 0.10	< 0.0033 (g/s)	10	0.3367 (g/s)	60	14/05/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	36	0.5129 (g/s)	21	0.2988 (g/s)	-	-	690	14/05/24
Styrene ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.007	< 0.0005 (g/s)	< 0.007	< 0.0005 (g/s)	20.52	1.124 (g/s)	-	21-23/05/24
Acrylonitrile ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.014	< 0.0005 (g/s)	< 0.014	< 0.0005 (g/s)	9.5	0.265 (g/s)	-	21-23/05/24
TOC ^{(2)*}	ppm	US.EPA Method 25A (FIA)	4.17	0.1183 (g/s)	5.31	0.1507 (g/s)	-	-	-	24/05/24

Remarks

* Subcontractor
: ABS : RTO1 Stack (Outlet-A) = 47P 0750567 UTM 1400134
ABS : RTO1 Stack (Outlet-B) = 47P 0750564 UTM 1400136

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Standard (A) According to Environmental Impact Assessment.

(B) Notification of the Ministry of Industry (2006) (B.E. 2549) and Notification of the Ministry of Natural Resources and Environment (2006) (B.E. 2549)

Source : Fuel Gas 164 Kg/hr.

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory
28.05.24

Approved by

Mrs. Pornpip Pethshee

Laboratory Manager
28.05.24



- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-1722/DIW
Received Date : 16/05/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการ โรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ

Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000

Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Sampling Conditions :

Item	Description	Unit	Result	
			RTO	
			2405-AS0531	2405-AS0532
			ABS : RTO1 Stack (Outlet-A)	ABS : RTO1 Stack (Outlet-B)
1	Sampling Date	-	14/05/24	14/05/24
2	Stack Diameter	m	Ø 1.35	Ø 1.35
3	Temperature ⁽¹⁾	°C	120	124
4	Stack Gas Velocity ⁽¹⁾	m/s	11.5	11.6
5	Flow Rate ⁽¹⁾	m ³ /s	16.5	16.6
6	Flow Rate ⁽²⁾	Nm ³ /s	12.4	12.4
7	O ₂ Rate ⁽¹⁾ , dry basis	%	18.6	18.2
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0	< 1.0
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	757.2	757.3

Parameter	Unit	Method	Result		Standard (With Combustion)	Analysis Date
			RTO			
			2405-AS0531	2405-AS0532		
			ABS : RTO1 Stack (Outlet-A)	ABS : RTO1 Stack (Outlet-B)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	6.10	10.50	200	14/05/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	< 0.10	60	14/05/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	36	21	690	14/05/24

Remarks : ABS : RTO1 Stack (Outlet-A) = 47P 0750567 UTM 1400134

ABS : RTO1 Stack (Outlet-B) = 47P 0750564 UTM 1400136

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Standard : Notification of the Ministry of Industry (2006) (B.E. 2549)

Source ; Fuel Gas 164 Kg/hr.

Reviewed by

Ms. Wareerut Prachumdaeng
Chief of Laboratory

2-236-ก-0002
28/05/24



Approved by

Mrs. Pornip Pethshee
Laboratory Manager

2-236-ก-0003
28/05/24

- PRIVATE LABORATORY REGISTERED NO. 2-236
- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-2079
Received Date : 14/06/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการ โรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ
Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000
Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Report Date : 24/06/24
Analysis Date : 12-21/06/24
Job No. : S670146/June
Sampling By : TET
Type of Sample : Stack

Sampling Conditions :

Item	Description	Unit	Result	
			RTO	
			2406-AS0533	
			ABS : RTO1 Stack (Inlet)	
1	Sampling Date	-	12/06/24	
2	Stack Diameter	m	Ø 1.54	
3	Temperature ⁽¹⁾	°C	50	
4	Stack Gas Velocity ⁽¹⁾	m/s	15.5	
5	Flow Rate ⁽¹⁾	m ³ /s	28.9	
6	Flow Rate ⁽²⁾	Nm ³ /s	26.6	
7	O ₂ Rate ⁽¹⁾ , dry basis	%	19.6	
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0	
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	759.6	

Parameter	Unit	Method	Result		Analysis Date
			RTO		
			2406-AS0533		
			ABS : RTO1 Stack (Inlet)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	10.10	0.5061 (g/s)	12/06/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	0.0070 (g/s)	12/06/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	13	0.3965 (g/s)	12/06/24
Styrene ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	15.487	1.7545 (g/s)	17-19/06/24
Acrylonitrile ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	15.501	0.6923 (g/s)	17-19/06/24
TOC ^{(2)*}	ppm	US.EPA Method 25A (FIA)	153.21	9.3326 (g/s)	21/06/24

Remarks * Subcontractor

: ABS : RTO1 Stack (Inlet) = 47P 0750586 UTM 1400133

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Source ; Fuel Gas 164 Kg/hr.

Reviewed by

Ms. Wareerut Prachumdaeng
Chief of Laboratory
24.06.24



Approved by

Mrs. Pornpip Pethshee
Laboratory Manager
24.06.24

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-2079
Received Date : 14/06/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการ โรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ

Report Date : 24/06/24
Analysis Date : 12-21/06/24
Job No. : S670146/June
Sampling By : TET
Type of Sample : Stack

Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000

Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Sampling Conditions :

Item	Description	Unit	Result	
			RTO	
			2406-AS0534	2406-AS0535
			ABS : RTO1 Stack (Outlet-A)	ABS : RTO1 Stack (Outlet-B)
1	Sampling Date	-	12/06/24	12/06/24
2	Stack Diameter	m	Ø 1.35	Ø 1.35
3	Temperature ⁽¹⁾	°C	120	125
4	Stack Gas Velocity ⁽¹⁾	m/s	11.8	11.6
5	Flow Rate ⁽¹⁾	m ³ /s	16.9	16.6
6	Flow Rate ⁽²⁾	Nm ³ /s	12.8	12.4
7	O ₂ Rate ⁽¹⁾ , dry basis	%	18.6	18.3
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0	< 1.0
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	757.3	757.2

Parameter	Unit	Method	Result				Standard (With Combustion)		Analysis Date	
			RTO							
			2406-AS0534		2406-AS0535		(A)	(B)		
			ABS : RTO1 Stack (Outlet-A)	ABS : RTO1 Stack (Outlet-B)						
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	8.60	0.2066 (g/s)	8.90	0.2075 (g/s)	25	0.6049 (g/s)	200	12/06/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	0.0033 (g/s)	< 0.10	0.0032 (g/s)	10	0.3367 (g/s)	60	12/06/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	31	0.4532 (g/s)	36	0.5109 (g/s)	-	-	690	12/06/24
Styrene ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.007	< 0.0005 (g/s)	< 0.007	< 0.0005 (g/s)	20.52	1.124 (g/s)	-	17-19/06/24
Acrylonitrile ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.014	< 0.0005 (g/s)	< 0.014	< 0.0005 (g/s)	9.5	0.265 (g/s)	-	17-19/06/24
TOC ^{(2)*}	ppm	US.EPA Method 25A (FIA)	62.85	1.8422 (g/s)	35.25	2.8454 (g/s)	-	-	-	21/06/24

Remarks

- * Subcontractor
- : ABS : RTO1 Stack (Outlet-A) = 47P 0750567 UTM 1400134
- ABS : RTO1 Stack (Outlet-B) = 47P 0750564 UTM 1400136

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Standard (A) According to Environmental Impact Assessment.

(B) Notification of the Ministry of Industry (2006) (B.E. 2549) and Notification of the Ministry of Natural Resources and Environment (2006) (B.E. 2549)

Source ; Fuel Gas 164 Kg/hr.

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

Approved by

Mrs. Pornnip Pethshee

Laboratory Manager

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-2079/DIW
Received Date : 14/06/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการโรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ
Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000
Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Report Date : 24/06/24
Analysis Date : 12/06/24
Job No. : S670146/June
Sampling By : Mr. Suchart Sriboon
Registration No. : จ-236-จ-0011
Type of Sample : Stack

Sampling Conditions :

Item	Description	Unit	Result	
			RTO	
			2406-AS0534	2406-AS0535
			ABS : RTO1 Stack (Outlet-A)	ABS : RTO1 Stack (Outlet-B)
1	Sampling Date	-	12/06/24	12/06/24
2	Stack Diameter	m	Ø 1.35	Ø 1.35
3	Temperature ⁽¹⁾	°C	120	125
4	Stack Gas Velocity ⁽¹⁾	m/s	11.8	11.6
5	Flow Rate ⁽¹⁾	m ³ /s	16.9	16.6
6	Flow Rate ⁽²⁾	Nm ³ /s	12.8	12.4
7	O ₂ Rate ⁽¹⁾ , dry basis	%	18.6	18.3
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0	< 1.0
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	757.3	757.2

Parameter	Unit	Method	Result		Standard (With Combustion)	Analysis Date
			RTO			
			2406-AS0534	2406-AS0535		
			ABS : RTO1 Stack (Outlet-A)	ABS : RTO1 Stack (Outlet-B)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	8.60	8.90	200	12/06/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	< 0.10	60	12/06/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	31	36	690	12/06/24

Remarks : ABS : RTO1 Stack (Outlet-A) = 47P 0750567 UTM 1400134
ABS : RTO1 Stack (Outlet-B) = 47P 0750564 UTM 1400136

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Standard : Notification of the Ministry of Industry (2006) (B.E. 2549)
Source ; Fuel Gas 164 Kg/hr.

Reviewed by

Ms. Wareerut Prachumdaeng
Chief of Laboratory

จ-236-ก-0002
24.06.24



Approved by

Mrs. Pornpip Pethshee
Laboratory Manager

จ-236-ก-0003
24.06.24

- PRIVATE LABORATORY REGISTERED NO. จ-236
- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-0217
Received Date : 19/01/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการ โรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ
Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000
Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Report Date : 30/01/24
Analysis Date : 18-26/01/24
Job No. : S670146/Jan
Sampling By : TET
Type of Sample : Stack

Sampling Conditions :

Item	Description	Unit	Result	
			RTO	
			2401-AS0489	
			ABS : RTO2 Stack (Inlet)	
1	Sampling Date	-	18/01/24	
2	Stack Diameter	m	Ø 1.55	
3	Temperature ⁽¹⁾	°C	50	
4	Stack Gas Velocity ⁽¹⁾	m/s	7.8	
5	Flow Rate ⁽¹⁾	m ³ /s	14.7	
6	Flow Rate ⁽²⁾	Nm ³ /s	13.6	
7	O ₂ Rate ⁽¹⁾ , dry basis	%	20.9	
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0	
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	758.5	

Parameter	Unit	Method	Result		Analysis Date
			RTO		
			2401-AS0489		
			ABS : RTO2 Stack (Inlet)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	7.20	0.1836 (g/s)	18/01/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	< 0.0036 (g/s)	18/01/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	13	0.2018 (g/s)	18/01/24
Styrene ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	2.457	0.1417 (g/s)	19-22/01/24
Acrylonitrile ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.014	< 0.0004 (g/s)	19-22/01/24
TOC ^{(2)*}	ppm	US.EPA Method 25A (FIA)	9.03	0.2804 (g/s)	26/01/24

Remarks

- * Subcontractor
- : ABS : RTO2 Stack (Inlet) = 47P 0750589 UTM 1400067
- (1) Flue conditions
- (2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Source ; Fuel Gas 0.4 Nm³/hr.

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

20/01/24



Approved by

Mrs. Porntip Pethshee

Laboratory Manager

30/01/24

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-0217
Received Date : 19/01/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการ โรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ
Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000
Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Report Date : 30/01/24
Analysis Date : 18-26/01/24
Job No. : S670146/Jan
Sampling By : TET
Type of Sample : Stack

Sampling Conditions :

Item	Description	Unit	Result
			RTO
			2401-AS0490
			ABS : RTO2 Stack (Outlet)
1	Sampling Date	-	18/01/24
2	Stack Diameter	m	Ø 2.00
3	Temperature ⁽¹⁾	°C	130
4	Stack Gas Velocity ⁽¹⁾	m/s	10.0
5	Flow Rate ⁽¹⁾	m ³ /s	31.4
6	Flow Rate ⁽²⁾	Nm ³ /s	23.2
7	O ₂ Rate ⁽¹⁾ , dry basis	%	20.2
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	757.2

Parameter	Unit	Method	Result		Standard (With Combustion)			Analysis Date
			RTO					
			2401-AS0490					
			ABS : RTO2 Stack (Outlet)		(A)	(B)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	11.20	0.4879 (g/s)	25	1.6201 (g/s)	200	18/01/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	< 0.0061 (g/s)	10	0.9016 (g/s)	60	18/01/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	31	0.8220 (g/s)	-	-	690	18/01/24
Styrene ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.007	< 0.0007 (g/s)	7.66	1.124 (g/s)	-	19-22/01/24
Acrylonitrile ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.014	< 0.0007 (g/s)	3.55	0.265 (g/s)	-	19-22/01/24
TOC ^{(2)*}	ppm	US.EPA Method 25A (FIA)	6.63	0.3515 (g/s)	-	-	-	26/01/24

Remarks

* Subcontractor
: ABS : RTO2 Stack (Outlet) = 47P 0750582 UTM 1400026

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Standard

(A) According to Environmental Impact Assessment.

(B) Notification of the Ministry of Industry (2006) (B.E. 2549) and Notification of the Ministry of Natural Resources and Environment (2006) (B.E. 2549)

Source : Fuel Gas 0.4 Nm³/hr.

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

30/01/24

Approved by

Mrs. Porntip Pethshee

Laboratory Manager

30/01/24



END OF REPORT

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-0217/DIW
Received Date : 19/01/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการ โรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ
Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000
Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Report Date : 30/01/24
Analysis Date : 18/01/24
Job No. : S670146/Jan
Sampling By : Mr. Kiattisak Wandee
Registration No. : ว-236-จ-0012
Type of Sample : Stack

Sampling Conditions :

Item	Description	Unit	Result
			RTO
			2401-AS0490
			ABS : RTO2 Stack (Outlet)
1	Sampling Date	-	18/01/24
2	Stack Diameter	m	Ø 2.00
3	Temperature ⁽¹⁾	°C	130
4	Stack Gas Velocity ⁽¹⁾	m/s	10.0
5	Flow Rate ⁽¹⁾	m ³ /s	31.4
6	Flow Rate ⁽²⁾	Nm ³ /s	23.2
7	O ₂ Rate ⁽¹⁾ , dry basis	%	20.2
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	757.2

Parameter	Unit	Method	Result	Standard (With Combustion)	Analysis Date
			RTO		
			2401-AS0490		
			ABS : RTO2 Stack (Outlet)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	11.20	200	18/01/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	60	18/01/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	31	690	18/01/24

Remarks : ABS : RTO2 Stack (Outlet) = 47P 0750582 UTM 1400026

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis. (open system)

Standard : Notification of the Ministry of Industry (2006) (B.E. 2549)

Source ; Fuel Gas 0.4 Nm³/hr.

Reviewed by

Ms. Wareerut Prachumdaeng
Chief of Laboratory

ว-236-ก-0002
30/01/24



Approved by

Mrs. Pomtip Pethshee
Laboratory Manager

ว-236-ก-0003
30/01/24

..... END OF REPORT

- PRIVATE LABORATORY REGISTERED NO. ว-236
- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-0597
Received Date : 14/02/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการโรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ
Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000
Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Report Date : 04/03/24
Analysis Date : 13-19/02/24
Job No. : S670146/Feb
Sampling By : TET
Type of Sample : Stack

Sampling Conditions :

Item	Description	Unit	Result	
			RTO	
			2402-AS0514	
			ABS : RTO2 Stack (Inlet)	
1	Sampling Date	-	13/02/24	
2	Stack Diameter	m	Ø 1.55	
3	Temperature ⁽¹⁾	°C	50	
4	Stack Gas Velocity ⁽¹⁾	m/s	8.5	
5	Flow Rate ⁽¹⁾	m ³ /s	16.0	
6	Flow Rate ⁽²⁾	Nm ³ /s	14.8	
7	O ₂ Rate ⁽¹⁾ , dry basis	%	20.9	
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0	
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	759.3	

Parameter	Unit	Method	Result		Analysis Date
			RTO		
			2402-AS0514		
			ABS : RTO2 Stack (Inlet)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	12.10	0.3367 (g/s)	13/02/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	< 0.0039 (g/s)	13/02/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	21	0.3557 (g/s)	13/02/24
Styrene ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.007	< 0.0004 (g/s)	15-19/02/24
Acrylonitrile ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.014	< 0.0004 (g/s)	15-19/02/24
TOC ^{(2)*}	ppm	US.EPA Method 25A (FIA)	8.85	0.2996 (g/s)	19/02/24

Remarks

- * Subcontractor
- : ABS : RTO2 Stack (Inlet) = 47P 0750589 UTM 1400067
- (1) Flue conditions
- (2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Source : Fuel Gas 35 Kg/day

Reviewed by

Ms. Wareerut Prachumdaeng
Chief of Laboratory
04/03/24



Approved by

Mrs. Pornpip Pethshee
Laboratory Manager
04/03/24

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL





TEST REPORT

Analysis No. : R24-0597
Received Date : 14/02/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการโรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ
Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000
Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Report Date : 04/03/24
Analysis Date : 13-19/02/24
Job No. : S670146/Feb
Sampling By : TET
Type of Sample : Stack

Sampling Conditions :

Item	Description	Unit	Result
			RTO
			2402-AS0515
			ABS : RTO2 Stack (Outlet)
1	Sampling Date	-	13/02/24
2	Stack Diameter	m	Ø 2.00
3	Temperature ⁽¹⁾	°C	135
4	Stack Gas Velocity ⁽¹⁾	m/s	10.1
5	Flow Rate ⁽¹⁾	m ³ /s	31.7
6	Flow Rate ⁽²⁾	Nm ³ /s	23.1
7	O ₂ Rate ⁽¹⁾ , dry basis	%	20.1
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	757.2

Parameter	Unit	Method	Result		Standard (With Combustion)			Analysis Date
			RTO					
			2402-AS0515					
			ABS : RTO2 Stack (Outlet)		(A)		(B)	
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	10.10	0.4389 (g/s)	25	1.6201 (g/s)	200	13/02/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	< 0.0061 (g/s)	10	0.9016 (g/s)	60	13/02/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	36	0.9523 (g/s)	-	-	690	13/02/24
Styrene ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.007	< 0.0007 (g/s)	7.66	1.124 (g/s)	-	15-19/02/24
Acrylonitrile ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.014	< 0.0007 (g/s)	3.55	0.265 (g/s)	-	15-19/02/24
TOC ^{(2)*}	ppm	US.EPA Method 25A (FIA)	6.63	0.3506 (g/s)	-	-	-	19/02/24

Remarks

* Subcontractor
: ABS : RTO2 Stack (Outlet) = 47P 0750582 UTM 1400026

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Standard

(A) According to Environmental Impact Assessment.

(B) Notification of the Ministry of Industry (2006) (B.E. 2549) and Notification of the Ministry of Natural Resources and Environment (2006) (B.E. 2549)

Source ; Fuel Gas 0.4 Nm³/hr.

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

04/03/24

Approved by

Mrs. Pornpip Pethshee

Laboratory Manager

04/03/24

END OF REPORT

● REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY

● DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL





TEST REPORT

Analysis No. : R24-0597/DIW
Received Date : 14/02/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการโรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ
Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000
Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Report Date : 04/03/24
Analysis Date : 13/02/24
Job No. : S670146/Feb
Sampling By : Mr. Paryud Jiwdach
Registration No. : ว-236-จ-0027
Type of Sample : Stack

Sampling Conditions :

Item	Description	Unit	Result
			RTO
			2402-AS0515
			ABS : RTO2 Stack (Outlet)
1	Sampling Date	-	13/02/24
2	Stack Diameter	m	Ø 2.00
3	Temperature ⁽¹⁾	°C	135
4	Stack Gas Velocity ⁽¹⁾	m/s	10.1
5	Flow Rate ⁽¹⁾	m ³ /s	31.7
6	Flow Rate ⁽²⁾	Nm ³ /s	23.1
7	O ₂ Rate ⁽¹⁾ , dry basis	%	20.1
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	757.2

Parameter	Unit	Method	Result	Standard (With Combustion)	Analysis Date
			RTO		
			2402-AS0515		
			ABS : RTO2 Stack (Outlet)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	10.10	200	13/02/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	60	13/02/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	36	690	13/02/24

Remarks : ABS : RTO2 Stack (Outlet) = 47P 0750582 UTM 1400026

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Standard : Notification of the Ministry of Industry (2006) (B.E. 2549)

Source : Fuel Gas 35 Kg/day

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

ว-236-จ-0002

04/03/24



Approved by

Mrs. Porntip Pethshee

Laboratory Manager

ว-236-จ-0003

04/03/24

..... END OF REPORT

- PRIVATE LABORATORY REGISTERED NO. ว-236
- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL





TEST REPORT

Analysis No. : R24-0954
Received Date : 13/03/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการ โรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ
Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000
Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Report Date : 21/03/24
Analysis Date : 12-20/03/24
Job No. : S670146/Mar
Sampling By : TET
Type of Sample : Stack

Sampling Conditions :

Item	Description	Unit	Result	
			RTO	
			2403-AS0470	
			ABS : RTO2 Stack (Inlet)	
1	Sampling Date	-	12/03/24	
2	Stack Diameter	m	Ø 1.55	
3	Temperature ⁽¹⁾	°C	42	
4	Stack Gas Velocity ⁽¹⁾	m/s	8.3	
5	Flow Rate ⁽¹⁾	m ³ /s	15.7	
6	Flow Rate ⁽²⁾	Nm ³ /s	14.8	
7	O ₂ Rate ⁽¹⁾ , dry basis	%	20.8	
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0	
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	759.7	

Parameter	Unit	Method	Result		Analysis Date
			RTO		
			2403-AS0470		
			ABS : RTO2 Stack (Inlet)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	10.60	0.2955 (g/s)	12/03/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	< 0.0039 (g/s)	12/03/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	21	0.3563 (g/s)	12/03/24
Styrene ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	4.902	0.3089 (g/s)	14-15/03/24
Acrylonitrile ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	14.105	0.4530 (g/s)	14-15/03/24
TOC ^{(2)*}	ppm	US.EPA Method 25A (FIA)	15.18	0.5150 (g/s)	20/03/24

Remarks * Subcontractor

: ABS : RTO2 Stack (Inlet) = 47P 0750589 UTM 1400067

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Source ; Fuel Gas 35 Kg/day

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

21/03/24



Approved by

Mrs. Pornpip Pethshee

Laboratory Manager

21/03/24

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-0954
Received Date : 13/03/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการโรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ
Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000
Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Report Date : 21/03/24
Analysis Date : 12-20/03/24
Job No. : S670146/Mar
Sampling By : TET
Type of Sample : Stack

Sampling Conditions :

Item	Description	Unit	Result
			RTO
			2403-AS0471
			ABS : RTO2 Stack (Outlet)
1	Sampling Date	-	12/03/24
2	Stack Diameter	m	Ø 2.00
3	Temperature ⁽¹⁾	°C	130
4	Stack Gas Velocity ⁽¹⁾	m/s	9.8
5	Flow Rate ⁽¹⁾	m ³ /s	30.8
6	Flow Rate ⁽²⁾	Nm ³ /s	22.7
7	O ₂ Rate ⁽¹⁾ , dry basis	%	19.5
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	757.2

Parameter	Unit	Method	Result		Standard (With Combustion)			Analysis Date
			RTO					
			2403-AS0471					
			ABS : RTO2 Stack (Outlet)		(A)	(B)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	10.80	0.4611 (g/s)	25	1.6201 (g/s)	200	12/03/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	< 0.0059 (g/s)	10	0.9016 (g/s)	60	12/03/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	35	0.9095 (g/s)	-	-	690	12/03/24
Styrene ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.007	< 0.0007 (g/s)	7.66	1.124 (g/s)	-	14-15/03/24
Acrylonitrile ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.014	< 0.0007 (g/s)	3.55	0.265 (g/s)	-	14-15/03/24
TOC ^{(2)*}	ppm	US.EPA Method 25A (FIA)	10.98	0.5705 (g/s)	-	-	-	20/03/24

Remarks

* Subcontractor
: ABS : RTO2 Stack (Outlet) = 47P 0750582 UTM 1400026

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Standard

(A) According to Environmental Impact Assessment.

(B) Notification of the Ministry of Industry (2006) (B.E. 2549) and Notification of the Ministry of Natural Resources and Environment (2006) (B.E. 2549)

Source ; Fuel Gas 0.4 Nm³/hr.

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

21/03/24

Approved by

Mrs. Pornpip Pethshee

Laboratory Manager

21/03/24

END OF REPORT

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-0954/DIW
Received Date : 13/03/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการโรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ
Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000
Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Report Date : 21/03/24
Analysis Date : 12-15/03/24
Job No. : S670146/Mar
Sampling By : Mr. Paryud Jiwdach
Registration No. : ว-236-จ-0027
Type of Sample : Stack

Sampling Conditions :

Item	Description	Unit	Result
			RTO
			2403-AS0471
			ABS : RTO2 Stack (Outlet)
1	Sampling Date	-	12/03/24
2	Stack Diameter	m	Ø 2.00
3	Temperature ⁽¹⁾	°C	130
4	Stack Gas Velocity ⁽¹⁾	m/s	9.8
5	Flow Rate ⁽¹⁾	m ³ /s	30.8
6	Flow Rate ⁽²⁾	Nm ³ /s	22.7
7	O ₂ Rate ⁽¹⁾ , dry basis	%	19.5
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	757.2

Parameter	Unit	Method	Result	Standard (With Combustion)	Analysis Date
			RTO		
			2403-AS0471		
			ABS : RTO2 Stack (Outlet)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	10.8	200	12/03/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	60	12/03/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	35	690	12/03/24

Remarks : ABS : RTO2 Stack (Outlet) = 47P 0750582 UTM 1400026

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Standard : Notification of the Ministry of Industry (2006) (B.E. 2549)

Source ; Fuel Gas 35 Kg/day

Reviewed by

Ms. Wareerut Prachumdaeng
Chief of Laboratory

ว-236-จ-0002
21/03/24



Approved by

Mrs. Pomtip Pethshee
Laboratory Manager

ว-236-จ-0003
21/03/24

..... END OF REPORT

- PRIVATE LABORATORY REGISTERED NO. ว-236
- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-1464
Received Date : 25/04/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการ โรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ
Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000
Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Report Date : 06/06/24
Analysis Date : 23-30/04/24
Job No. : S670146/Apr
Sampling By : TET
Type of Sample : Stack

Sampling Conditions :

Item	Description	Unit	Result	
			RTO	
			2404-AS0685	
			ABS : RTO2 Stack (Inlet)	
1	Sampling Date	-	23/04/24	
2	Stack Diameter	m	Ø 1.55	
3	Temperature ⁽¹⁾	°C	52	
4	Stack Gas Velocity ⁽¹⁾	m/s	9.5	
5	Flow Rate ⁽¹⁾	m ³ /s	17.9	
6	Flow Rate ⁽²⁾	Nm ³ /s	16.4	
7	O ₂ Rate ⁽¹⁾ , dry basis	%	20.9	
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0	
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	759.6	

Parameter	Unit	Method	Result		Analysis Date
			RTO		
			2404-AS0685		
			ABS : RTO2 Stack (Inlet)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	10.60	0.3277 (g/s)	23/04/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	< 0.0043 (g/s)	23/04/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	18	0.3388 (g/s)	23/04/24
Styrene ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.007	< 0.0005 (g/s)	25-29/04/24
Acrylonitrile ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.014	< 0.0005 (g/s)	25-29/04/24
TOC ^{(2)*}	ppm	US.EPA Method 25A (FIA)	5.25	0.1975 (g/s)	30/04/24

Remarks

- * Subcontractor
- : ABS : RTO2 Stack (Inlet) = 47P 0750589 UTM 1400067
- (1) Flue conditions
- (2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)
- Source ; Fuel Gas 80 Kg/day

Reviewed by

Ms. Wareerut Prachumdaeng
Chief of Laboratory
06/06/24



Approved by

Mrs. Pomtip Pethshee
Laboratory Manager
06/06/24

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-1464
Received Date : 25/04/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการโรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ

Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000

Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Sampling Conditions :

Item	Description	Unit	Result
			RTO
			2404-AS0686
			ABS : RTO2 Stack (Outlet)
1	Sampling Date	-	23/04/24
2	Stack Diameter	m	Ø 2.00
3	Temperature ⁽¹⁾	°C	130
4	Stack Gas Velocity ⁽¹⁾	m/s	10.3
5	Flow Rate ⁽¹⁾	m ³ /s	32.4
6	Flow Rate ⁽²⁾	Nm ³ /s	23.9
7	O ₂ Rate ⁽¹⁾ , dry basis	%	19.8
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	757.3

Parameter	Unit	Method	Result		Standard (With Combustion)			Analysis Date
			RTO					
			2404-AS0686					
			ABS : RTO2 Stack (Outlet)		(A)	(B)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	9.70	0.0044 (g/s)	25	1.6201 (g/s)	200	23/04/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	< 0.0001 (g/s)	10	0.9016 (g/s)	60	23/04/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	33	0.0090 (g/s)	-	-	690	23/04/24
Styrene ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.007	< 0.00001 (g/s)	7.66	1.124 (g/s)	-	25-29/04/24
Acrylonitrile ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.014	< 0.00001 (g/s)	3.55	0.265 (g/s)	-	25-29/04/24
TOC ^{(2)*}	ppm	US.EPA Method 25A (FIA)	4.53	0.0025 (g/s)	-	-	-	30/04/24

Remarks

* Subcontractor
: ABS : RTO2 Stack (Outlet) = 47P 0750582 UTM 1400026

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Standard

(A) According to Environmental Impact Assessment.

(B) Notification of the Ministry of Industry (2006) (B.E. 2549) and Notification of the Ministry of Natural Resources and Environment (2006) (B.E. 2549)

Source ; Fuel Gas 80 Kg/day

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

06/06/24

Approved by

Mrs. Porntip Pethshee

Laboratory Manager

06/06/24



- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-1464/DIW
Received Date : 25/04/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการโรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ
Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000
Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Report Date : 06/06/24
Analysis Date : 23/04/24
Job No. : S670146/Apr
Sampling By : Mr. Paryud Jiwdach
Registration No. : ๖-236-จ-0027
Type of Sample : Stack

Sampling Conditions :

Item	Description	Unit	Result
			RTO
			2404-AS0686
			ABS : RTO2 Stack (Outlet)
1	Sampling Date	-	23/04/24
2	Stack Diameter	m	Ø 2.00
3	Temperature ⁽¹⁾	°C	130
4	Stack Gas Velocity ⁽¹⁾	m/s	10.3
5	Flow Rate ⁽¹⁾	m ³ /s	32.4
6	Flow Rate ⁽²⁾	Nm ³ /s	23.9
7	O ₂ Rate ⁽¹⁾ , dry basis	%	19.8
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	757.3

Parameter	Unit	Method	Result	Standard (With Combustion)	Analysis Date
			RTO		
			2404-AS0686		
			ABS : RTO2 Stack (Outlet)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	9.70	200	23/04/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	60	23/04/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	33	690	23/04/24

Remarks : ABS : RTO2 Stack (Outlet) = 47P 0750582 UTM 1400026

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Standard : Notification of the Ministry of Industry (2006) (B.E. 2549)

Source ; Fuel Gas 80 Kg/day

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

๖-236-จ-0002

06.06.24



Approved by

Mrs. Pornpip Pethshee

Laboratory Manager

๖-236-จ-0003

06.06.24

- PRIVATE LABORATORY REGISTERED NO. ๖-236
- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-1722
Received Date : 16/05/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการโรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ
Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000
Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Report Date : 28/05/24
Analysis Date : 14-24/05/24
Job No. : S670146/May
Sampling By : TET
Type of Sample : Stack

Sampling Conditions :

Item	Description	Unit	Result	
			RTO	
			2405-AS0533	
			ABS : RTO2 Stack (Inlet)	
1	Sampling Date	-	14/05/24	
2	Stack Diameter	m	Ø 1.55	
3	Temperature ⁽¹⁾	°C	48	
4	Stack Gas Velocity ⁽¹⁾	m/s	9.0	
5	Flow Rate ⁽¹⁾	m ³ /s	17.0	
6	Flow Rate ⁽²⁾	Nm ³ /s	15.7	
7	O ₂ Rate ⁽¹⁾ , dry basis	%	20.8	
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0	
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	757.6	

Parameter	Unit	Method	Result		Analysis Date
			RTO		
			2405-AS0533		
			ABS : RTO2 Stack (Inlet)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	11.60	0.3431 (g/s)	14/05/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	< 0.0041 (g/s)	14/05/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	18	0.3241(g/s)	14/05/24
Styrene ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	1.060	0.0709 (g/s)	21-23/05/24
Acrylonitrile ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.014	< 0.0005 (g/s)	21-23/05/24
TOC ^{(2)*}	ppm	US.EPA Method 25A (FIA)	8.79	0.3159 (g/s)	24/05/24

Remarks

- * Subcontractor
- : ABS : RTO2 Stack (Inlet) = 47P 0750589 UTM 1400067
- (1) Flue conditions
- (2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Source ; Fuel Gas 80 Kg/day

Reviewed by

Ms. Wareerut Prachumdaeng
Chief of Laboratory
28.05.24



Approved by

Mrs. Pornpip Pethshee
Laboratory Manager
28.05.24

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-1722
Received Date : 16/05/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการ โรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ
Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000
Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Report Date : 28/05/24
Analysis Date : 14-24/05/24
Job No. : S670146/May
Sampling By : TET
Type of Sample : Stack

Sampling Conditions :

Item	Description	Unit	Result
			RTO
			2405-AS0534
			ABS : RTO2 Stack (Outlet)
1	Sampling Date	-	14/05/24
2	Stack Diameter	m	Ø 2.00
3	Temperature ⁽¹⁾	°C	130
4	Stack Gas Velocity ⁽¹⁾	m/s	9.9
5	Flow Rate ⁽¹⁾	m ³ /s	31.1
6	Flow Rate ⁽²⁾	Nm ³ /s	22.9
7	O ₂ Rate ⁽¹⁾ , dry basis	%	20.6
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	757.2

Parameter	Unit	Method	Result		Standard (With Combustion)			Analysis Date
			RTO					
			2405-AS0534					
			ABS : RTO2 Stack (Outlet)		(A)	(B)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	13.60	0.5865 (g/s)	25	1.6201 (g/s)	200	14/05/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	< 0.0060 (g/s)	10	0.9016 (g/s)	60	14/05/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	32	0.8400 (g/s)	-	-	690	14/05/24
Styrene ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.007	< 0.0009 (g/s)	7.66	1.124 (g/s)	-	21-23/05/24
Acrylonitrile ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.014	< 0.0009 (g/s)	3.55	0.265 (g/s)	-	21-23/05/24
TOC ^{(2)*}	ppm	US.EPA Method 25A (FIA)	4.74	0.2485 (g/s)	-	-	-	24/05/24

Remarks

* Subcontractor
: ABS : RTO2 Stack (Outlet) = 47P 0750582 UTM 1400026

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Standard

(A) According to Environmental Impact Assessment.

(B) Notification of the Ministry of Industry (2006) (B.E. 2549) and Notification of the Ministry of Natural Resources and Environment (2006) (B.E. 2549)

Source ; Fuel Gas 80 Kg/day

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

28/05/24

Approved by

Mrs. Pomtip Pethshee

Laboratory Manager

28/05/24

END OF REPORT

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-1722/DIW
Received Date : 16/05/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการโรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ

Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000

Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Sampling Conditions :

Item	Description	Unit	Result
			RTO
			2405-AS0534
			ABS : RTO2 Stack (Outlet)
1	Sampling Date	-	14/05/24
2	Stack Diameter	m	Ø 2.00
3	Temperature ⁽¹⁾	°C	130
4	Stack Gas Velocity ⁽¹⁾	m/s	9.9
5	Flow Rate ⁽¹⁾	m ³ /s	31.1
6	Flow Rate ⁽²⁾	Nm ³ /s	22.9
7	O ₂ Rate ⁽¹⁾ , dry basis	%	20.6
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	757.2

Parameter	Unit	Method	Result	Standard (With Combustion)	Analysis Date
			RTO		
			2405-AS0534		
			ABS : RTO2 Stack (Outlet)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	13.60	200	14/05/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	60	14/05/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	32	690	14/05/24

Remarks : ABS : RTO2 Stack (Outlet) = 47P 0750582 UTM 1400026

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Standard : Notification of the Ministry of Industry (2006) (B.E. 2549)

Source ; Fuel Gas 80 Kg/day

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

3-236-ก-0002
28/05/24



Approved by

Mrs. Pornip Pethshee

Laboratory Manager

3-236-ก-0003
28/05/24

END OF REPORT

- PRIVATE LABORATORY REGISTERED NO. 3-236
- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-2079
Received Date : 14/06/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการ โรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ

Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000

Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Sampling Conditions :

Item	Description	Unit	Result	
			RTO	
			2406-AS0536	
			ABS : RTO2 Stack (Inlet)	
1	Sampling Date	-	12/06/24	
2	Stack Diameter	m	Ø 1.55	
3	Temperature ⁽¹⁾	°C	46	
4	Stack Gas Velocity ⁽¹⁾	m/s	9.5	
5	Flow Rate ⁽¹⁾	m ³ /s	17.9	
6	Flow Rate ⁽²⁾	Nm ³ /s	16.7	
7	O ₂ Rate ⁽¹⁾ , dry basis	%	20.9	
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0	
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	759.4	

Parameter	Unit	Method	Result		Analysis Date
			RTO		
			2406-AS0536		
			ABS : RTO2 Stack (Inlet)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	6.20	0.1953 (g/s)	12/06/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 1.0	0.4386 (g/s)	12/06/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	13	0.2492 (g/s)	12/06/24
Styrene ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	16.016	1.1404 (g/s)	17-19/06/24
Acrylonitrile ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	7.062	0.1982 (g/s)	17-19/06/24
TOC ^{(2)*}	ppm	US.EPA Method 25A (FIA)	267.63	10.2349 (g/s)	21/06/24

Remarks * Subcontractor

: ABS : RTO2 Stack (Inlet) = 47P 0750589 UTM 1400067

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

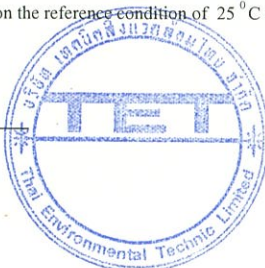
Source : Fuel Gas 80 Kg/day

Reviewed by

Ms. Wareerut Prachumdaeng
Chief of Laboratory

Approved by

Mrs. Pomtip Pethshee
Laboratory Manager



- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-2079
Received Date : 14/06/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการโรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ
Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000
Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Report Date : 24/06/24
Analysis Date : 12-21/06/24
Job No. : S670146/June
Sampling By : TET
Type of Sample : Stack

Sampling Conditions :

Item	Description	Unit	Result
			RTO
			2406-AS0537
			ABS : RTO2 Stack (Outlet)
1	Sampling Date	-	12/06/24
2	Stack Diameter	m	Ø 2.00
3	Temperature ⁽¹⁾	°C	140
4	Stack Gas Velocity ⁽¹⁾	m/s	10.4
5	Flow Rate ⁽¹⁾	m ³ /s	32.7
6	Flow Rate ⁽²⁾	Nm ³ /s	23.5
7	O ₂ Rate ⁽¹⁾ , dry basis	%	19.8
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	757.1

Parameter	Unit	Method	Result		Standard (With Combustion)			Analysis Date
			RTO					
			2406-AS0537					
			ABS : RTO2 Stack (Outlet)		(A)	(B)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	11.80	0.5216 (g/s)	25	1.6201 (g/s)	200	12/06/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	< 0.0062 (g/s)	10	0.9016 (g/s)	60	12/06/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	41	1.1031 (g/s)	-	-	690	12/06/24
Styrene ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.007	< 0.0010 (g/s)	7.66	1.124 (g/s)	-	17-19/06/24
Acrylonitrile ⁽²⁾	ppm	Solid Sorbent Tube, GC/FID (US.EPA Mt.18, Jan 14, 2019)	< 0.014	< 0.0010 (g/s)	3.55	0.265 (g/s)	-	17-19/06/24
TOC ^{(2)*}	ppm	US.EPA Method 25A (FIA)	52.95	2.8494 (g/s)	-	-	-	21/06/24

Remarks

* Subcontractor
: ABS : RTO2 Stack (Outlet) = 47P 0750582 UTM 1400026
(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Standard

(A) According to Environmental Impact Assessment.

(B) Notification of the Ministry of Industry (2006) (B.E. 2549) and Notification of the Ministry of Natural Resources and Environment (2006) (B.E. 2549)

Source ; Fuel Gas 80 Kg/day

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

24.06.24

Approved by

Mrs. Pornip Pethshee

Laboratory Manager

24.06.24

END OF REPORT

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-2079/DIW
Received Date : 14/06/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการ โรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ
Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000
Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Report Date : 24/06/24
Analysis Date : 12/06/24
Job No. : S670146/June
Sampling By : Mr. Suchart Sriboon
Registration No. : ว-236-จ-0011
Type of Sample : Stack

Sampling Conditions :

Item	Description	Unit	Result
			RTO
			2406-AS0537
			ABS : RTO2 Stack (Outlet)
1	Sampling Date	-	12/06/24
2	Stack Diameter	m	Ø 2.00
3	Temperature ⁽¹⁾	°C	140
4	Stack Gas Velocity ⁽¹⁾	m/s	10.4
5	Flow Rate ⁽¹⁾	m ³ /s	32.7
6	Flow Rate ⁽²⁾	Nm ³ /s	23.5
7	O ₂ Rate ⁽¹⁾ , dry basis	%	19.8
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	< 1.0
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	757.1

Parameter	Unit	Method	Result	Standard (With Combustion)	Analysis Date
			RTO		
			2406-AS0537		
			ABS : RTO2 Stack (Outlet)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	11.80	200	12/06/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	60	12/06/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	41	690	12/06/24

Remarks : ABS : RTO2 Stack (Outlet) = 47P 0750582 UTM 1400026

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Standard : Notification of the Ministry of Industry (2006) (B.E. 2549)

Source ; Fuel Gas 80 Kg/day

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

ว-236-ก-0002
24.06.24



Approved by

Mrs. Pornip Pethshee

Laboratory Manager

ว-236-ก-0003
24.06.24

..... END OF REPORT

- PRIVATE LABORATORY REGISTERED NO. ว-236
- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-1464
Received Date : 25/04/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการโรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ

Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000

Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Sampling Conditions :

Item	Description	Unit	Result
			SAN
			2404-AS0687
			SAN : HTM Burner [28A801]
1	Sampling Date	-	23/04/24
2	Stack Diameter	m	Ø 0.55
3	Temperature ⁽¹⁾	°C	151
4	Stack Gas Velocity ⁽¹⁾	m/s	6.3
5	Flow Rate ⁽¹⁾	m ³ /s	1.5
6	Flow Rate ⁽²⁾	Nm ³ /s	1.0
7	O ₂ Rate ⁽¹⁾ , dry basis	%	2.3
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	12.4
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	756.9

Parameter	Unit	Method	Result		Standard (With Combustion)			Analysis Date
			SAN					
			2404-AS0687					
			SAN : HTM Burner [28A801]		(A)	(B)		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	55.00	0.0896 (g/s)	100	0.1280 (g/s)	200	23/04/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	< 0.0002 (g/s)	15	0.0267 (g/s)	60	23/04/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	< 1	< 0.0010 (g/s)	-	-	690	23/04/24
TOC ^{(2)*}	ppm	US.EPA Method 25A (FIA)	3.54	0.0070 (g/s)	-	-	-	30/04/24

Remarks * Subcontractor

: SAN : HTM Burner [28A801] = 47P 0750711 UTM 1400065

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Standard (A) According to Environmental Impact Assessment.

(B) Notification of the Ministry of Industry (2006) (B.E. 2549) and Notification of the Ministry of Natural Resources and Environment (2006) (B.E. 2549)

Source ; Fuel Gas 65 Kg/hr.

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

06/06/24



Approved by

Mrs. Pornpip Pethshee

Laboratory Manager

06/06/24

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-1464/DIW
Received Date : 25/04/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการโรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ
Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000
Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Report Date : 06/06/24
Analysis Date : 23/04/24
Job No. : S670146/Apr
Sampling By : Mr. Pramual Moonsarn
Registration No. : ๖-236-ก-0005
Type of Sample : Stack

Sampling Conditions :

Item	Description	Unit	Result
			SAN
			2404-AS0687
			SAN : HTM Burner [28A801]
1	Sampling Date	-	23/04/24
2	Stack Diameter	m	Ø 0.55
3	Temperature ⁽¹⁾	°C	151
4	Stack Gas Velocity ⁽¹⁾	m/s	6.3
5	Flow Rate ⁽¹⁾	m ³ /s	1.5
6	Flow Rate ⁽²⁾	Nm ³ /s	1.0
7	O ₂ Rate ⁽¹⁾ , dry basis	%	2.3
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	12.4
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	756.9

Parameter	Unit	Method	Result	Standard (With Combustion)	Analysis Date
			SAN		
			2404-AS0687		
			SAN : HTM Burner [28A801]		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	55.00	200	23/04/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	60	23/04/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	< 1	690	23/04/24

Remarks : SAN : HTM Burner [28A801] = 47P 0750711 UTM 1400065

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Standard : Notification of the Ministry of Industry (2006) (B.E. 2549)

Source ; Fuel Gas 65 kg/hr.

Reviewed by

Ms. Wareerut Prachumdaeng
Chief of Laboratory
๖-236-ก-0002
๐๖.๐๖.๒๔



Approved by

Mrs. Pornpip Pethshee
Laboratory Manager
๖-236-ก-0003
๐๖.๐๖.๒๔

- PRIVATE LABORATORY REGISTERED NO. ๖-236
- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-1464
Received Date : 25/04/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการโรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ

Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000

Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Sampling Conditions :

Item	Description	Unit	Result	
			SAN	
			2404-AS0688	
			SAN : HTM Burner [48A801]	
1	Sampling Date	-	23/04/24	
2	Stack Diameter	m	Ø 0.60	
3	Temperature ⁽¹⁾	°C	207	
4	Stack Gas Velocity ⁽¹⁾	m/s	6.7	
5	Flow Rate ⁽¹⁾	m ³ /s	1.9	
6	Flow Rate ⁽²⁾	Nm ³ /s	1.2	
7	O ₂ Rate ⁽¹⁾ , dry basis	%	2.3	
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	12.4	
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	757.0	

Parameter	Unit	Method	Result		Standard (With Combustion)			Analysis Date
			SAN					
			2404-AS0688					
			SAN : HTM Burner [48A801]		(A)		(B)	
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	35.00	0.0772 (g/s)	100	0.1871 (g/s)	200	23/04/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	< 0.0003 (g/s)	15	0.0390 (g/s)	60	23/04/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	10	0.0134 (g/s)	-	-	690	23/04/24
TOC ^{(2)*}	ppm	US.EPA Method 25A (FIA)	3.87	0.0104 (g/s)	-	-	-	30/04/24

Remarks * Subcontractor

: SAN : HTM Burner [48A801] = 47P 0750554 UTM 1399913

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Standard (A) According to Environmental Impact Assessment.

(B) Notification of the Ministry of Industry (2006) (B.E. 2549) and Notification of the Ministry of Natural Resources and Environment (2006) (B.E. 2549)

Source ; Fuel Gas 8.6 Nm³/hr.

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

16, 16, 24



Approved by

Mrs. Pomtip Pethshee

Laboratory Manager

16, 16, 24

END OF REPORT

- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL



TEST REPORT

Analysis No. : R24-1464/DIW
Received Date : 25/04/24
Customer : Technical Division of Thai Environmental Technic Limited
For บริษัท ไออาร์พีซี จำกัด (มหาชน)
โครงการ โรงงานผลิตเม็ดพลาสติกชนิดเอบีเอส
(ครั้งที่ 1) ระยะดำเนินการ

Address : 299 หมู่ 5 ถนนสุขุมวิท ตำบลเชิงเนิน
อำเภอเมืองระยอง จังหวัดระยอง 21000

Contact : Tel. (038) 611 333 # 2398 Fax. (038) 612 812-3

Sampling Conditions :

Item	Description	Unit	Result
			SAN
			2404-AS0688
			SAN : HTM Burner [48A801]
1	Sampling Date	-	23/04/24
2	Stack Diameter	m	Ø 0.60
3	Temperature ⁽¹⁾	°C	207
4	Stack Gas Velocity ⁽¹⁾	m/s	6.7
5	Flow Rate ⁽¹⁾	m ³ /s	1.9
6	Flow Rate ⁽²⁾	Nm ³ /s	1.2
7	O ₂ Rate ⁽¹⁾ , dry basis	%	2.3
8	CO ₂ Rate ⁽¹⁾ , dry basis	%	12.4
9	Absolute Stack Pressure ⁽¹⁾	mm.Hg	757.0

Parameter	Unit	Method	Result	Standard (With Combustion)	Analysis Date
			SAN		
			2404-AS0688		
			SAN : HTM Burner [48A801]		
NO _x as NO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 7E, Oct 07, 2020)	35.00	200	23/04/24
SO ₂ ⁽²⁾	ppm	Instrument Analyzer Method (US.EPA Method 6C, Aug 2, 2017)	< 0.10	60	23/04/24
CO ⁽²⁾	ppm	NDIR Method (US.EPA Method 10, Aug 02, 2017)	10	690	23/04/24

Remarks : SAN : HTM Burner [48A801] = 47P 0750554 UTM 1399913

(1) Flue conditions

(2) The concentrations of air emissions and emission rate are based on the reference condition of 25 °C at 1 atm or 760 mm.Hg and dry basis, (open system)

Standard : Notification of the Ministry of Industry (2006) (B.E. 2549)

Source ; Fuel Gas 8.6 Nm³/hr.

Reviewed by

Ms. Wareerut Prachumdaeng

Chief of Laboratory

๓-๒๓๖-๓-๐๐๐๒
๑๖/๑๖/๒๔



Approved by

Mrs. Pornpip Pethshee

Laboratory Manager

๓-๒๓๖-๓-๐๐๐๓
๑๖/๑๖/๒๔

..... END OF REPORT

- PRIVATE LABORATORY REGISTERED NO. ๓-236
- REPORTED RESULTS REFER TO SUBMITTED SAMPLE(S) ONLY
- DO NOT COPY PARTIAL OF THIS ANALYSIS REPORT WITHOUT OFFICIAL APPROVAL